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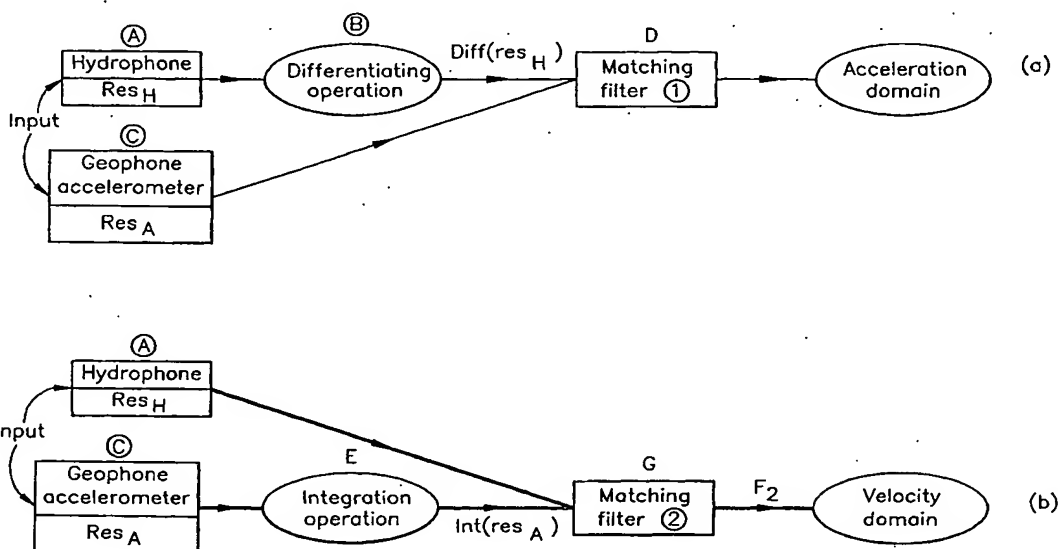
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(57) Abstract: A method of matching the impulse response of a hydrophone and the impulse response of a geophone accelerometer comprises performing a calculus operation upon the response of one of the hydrophone and the accelerometer. A filter is then derived from the output of the calculus operation and the response of the other of the hydrophone and the accelerometer. The filter may then be used to match seismic data acquired by the one of the hydrophone and the accelerometer to seismic data acquired by the other of the hydrophone and the accelerometer. The calculus operation may comprise differentiating the hydrophone response, or integrating the accelerometer impulse response.